

Learn how to get End to End visibility into IBM Z with leading APM vendors

Nathan Brice
IBM

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Session OG



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Current challenges facing the digital enterprise

Velocity of change is increasing while buying power is shifting from IT to the LOB

IT is now being held accountable for SLAs at a business application level while rate of change accelerates and operational complexity increases

Growth of hybrid cloud apps is increasing complexity

The mapping between business applications and mainframe resources are unclear and silos among people and environment inhibits SLAs attainment

IT Operation environment is increasingly strained

Organizations face skills issues as they go through a generational shift and teams are asked to reduce cost while maintaining operational integrity

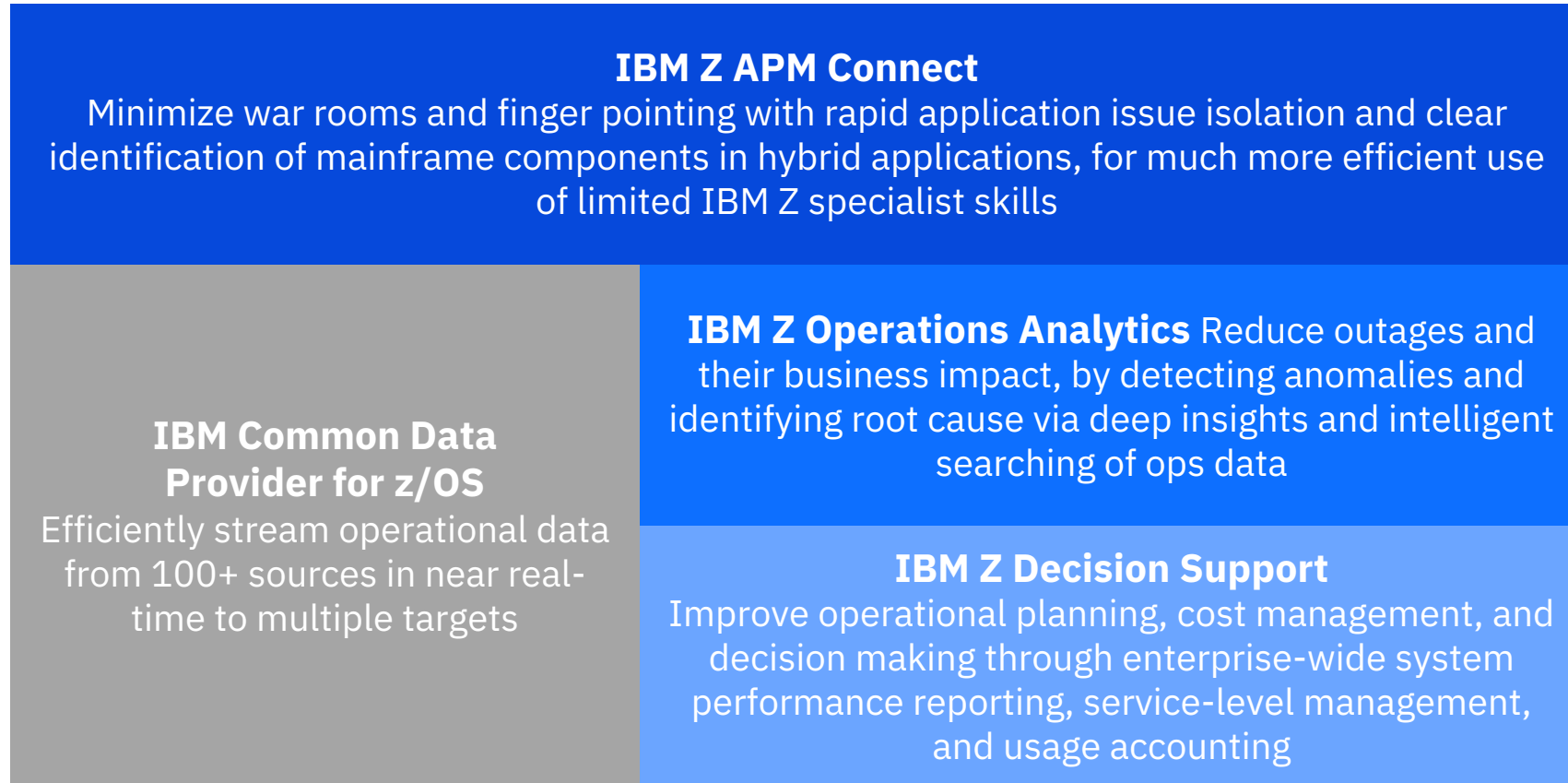


IBM IT Operations Analytics Portfolio

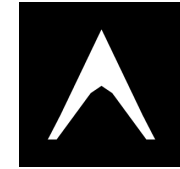
Transport IBM Z ops data to where you need it

Provide insights, detect anomalies, and curate data

Use the platform of your choice



APM Platforms



IT Operational Analytics Platforms



IBM offers solutions to address all of these challenges

CDPz
 IBM Common Data Provider for z/OS

IZOA
 IBM Z Operational Analytics

IZDS
 IBM Z Decision Support

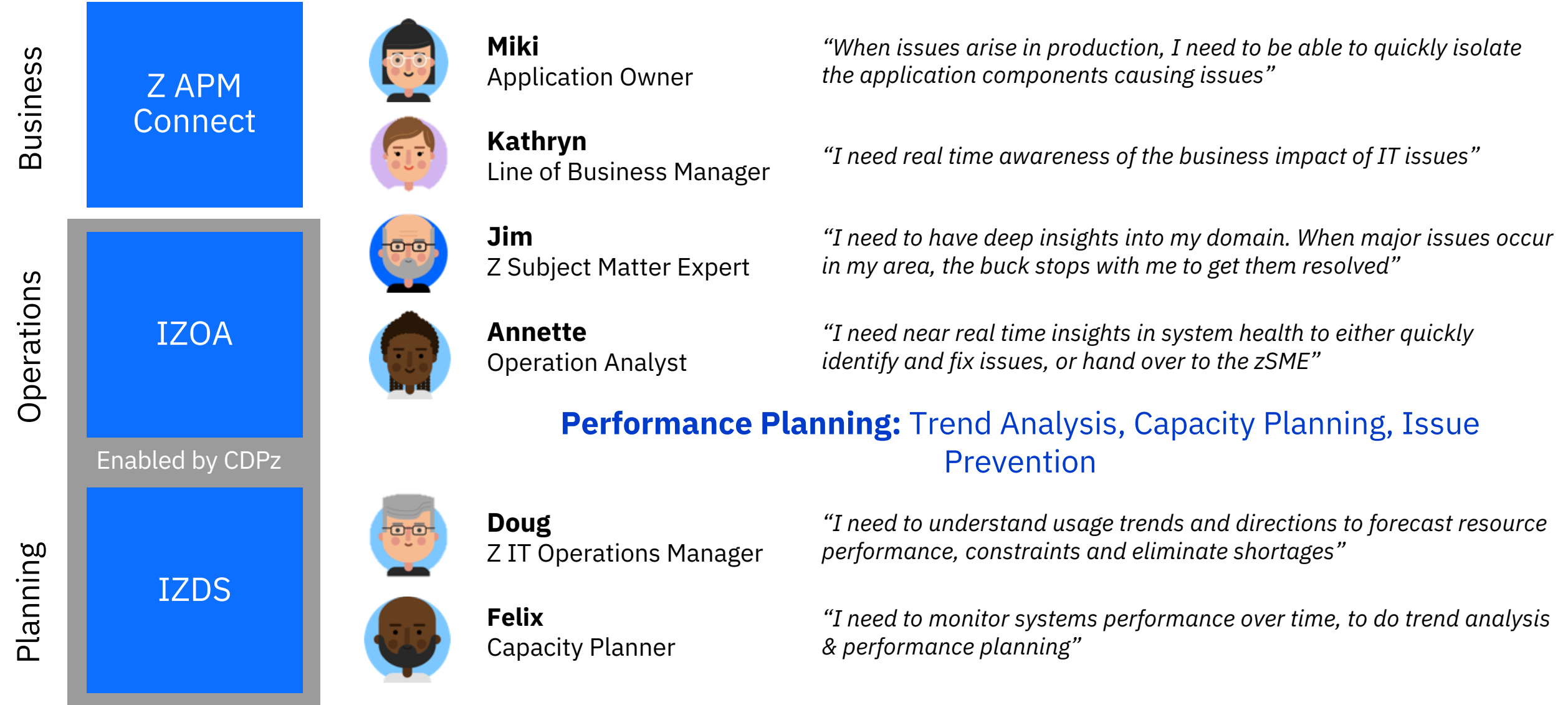
Z APM
 IBM Z Application Performance Management Connect

Pain Points	Business Challenges	IBM Solutions
Velocity of change is increasing	SLAs at a business level	Z APM + IZOA
	Risk of outages	
	Unpredictable workloads	IZDS
Growth of hybrid cloud applications is increasing complexity	Mapping between application and resources unclear	Z APM
	Siloed working	Log Analytics & APM Solutions like Splunk, ELK, AppDynamics Enabled by CDP, Z APM, IZOA
IT Operation environment is increasingly strained	Skills issues	Log Analytics & APM Solutions like Splunk, ELK, AppDynamics Enabled by CDP, Z APM, IZOA
	Reducing costs	IZDS, Vendor consolidation, cost effective purchase vehicle

Only IBM provides a comprehensive offering to address the breadth of customer challenges

IBM Z Operations Analytics Offerings by Users

Problem Determination: Isolation, Identification, Remediation



Performance Planning: Trend Analysis, Capacity Planning, Issue Prevention

Application Performance Management (APM) Tools

- Hybrid cloud applications are growing in number and complexity because new layers of IT systems are being built out on top of previous layers
- Applications are now managed at the Line of Business level and accountability for the SLAs is on an application by application basis
- **The APM market is growing rapidly at 25% CAGR**

Identify performance issues before hand

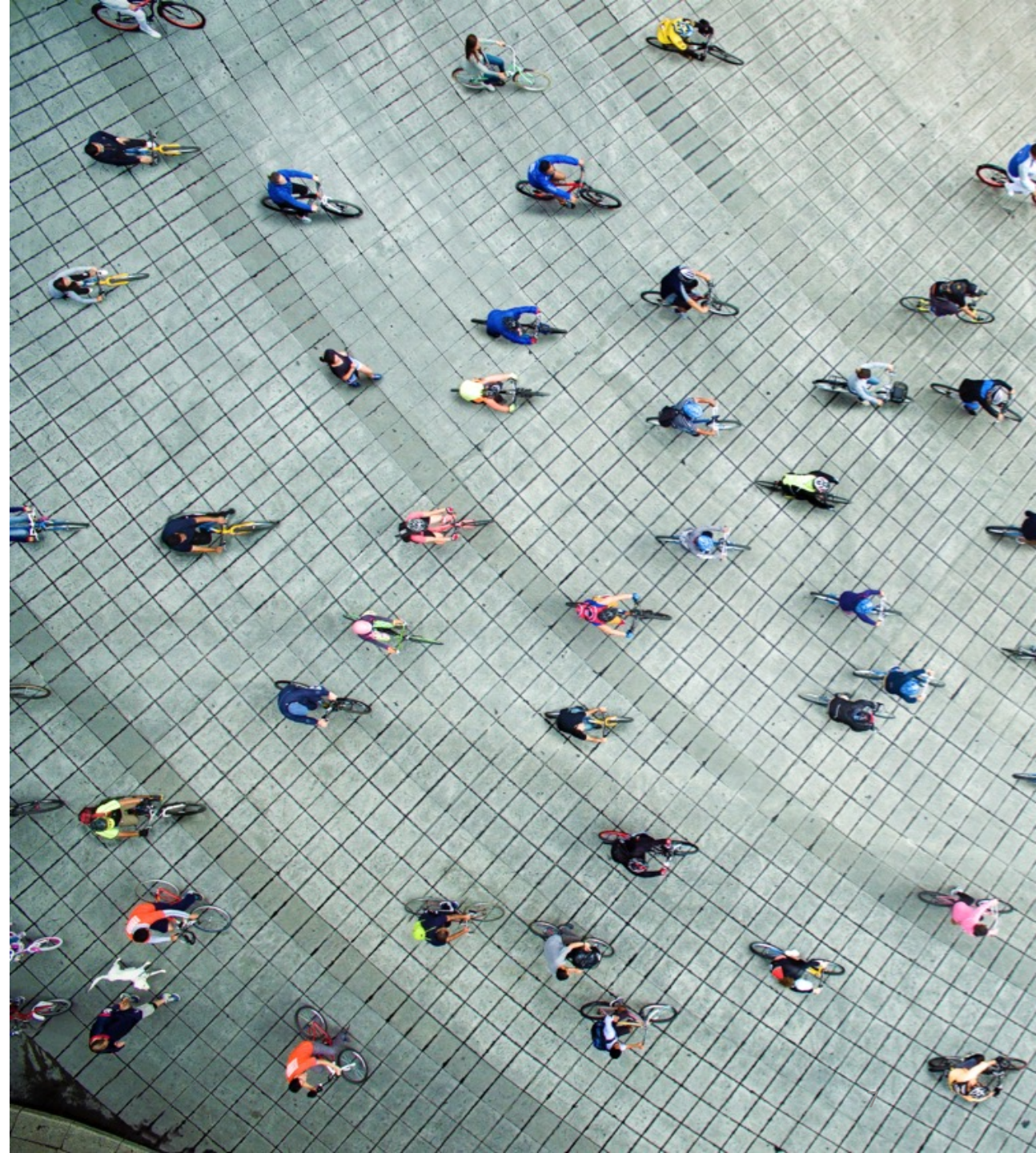
Reduce outages by 50% or more

Isolate where the problem is occurring

Improve availability by 60-90%

Diagnose for quicker problem isolation

Diagnose problems 90% faster



Faster isolation & fixes

96x

Faster mean time to repair for companies with effective APMs
2018 State of DevOps Report

Reduced application downtime

\$700K

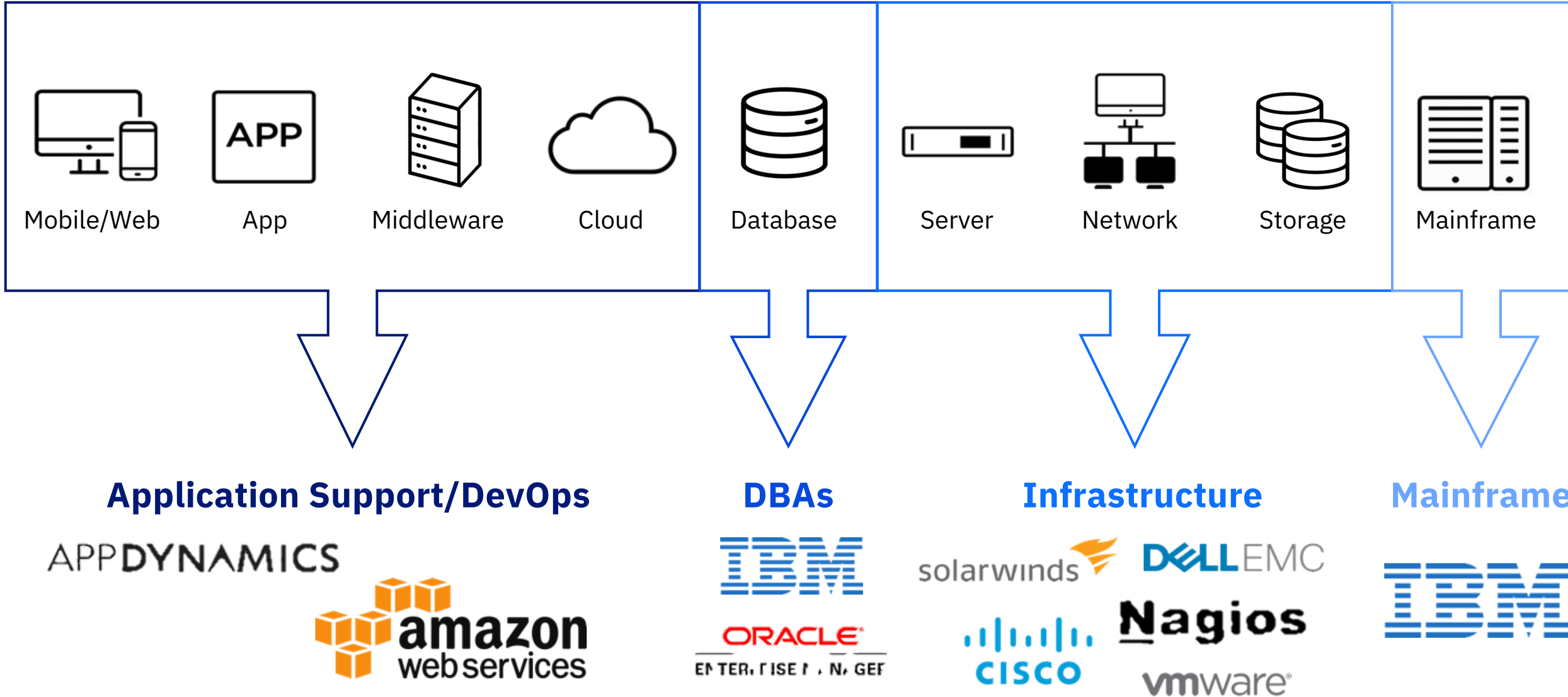
An hour is how much large companies lose, on average, during an hour of down time
Aberdeen Group

Fewer war rooms and false positives for mainframe SMEs

59%

Less man-hours spent in war rooms in organizations where APM data is actionable
TRAC Research

Siloed Views and Tools Still Plague Most Organization



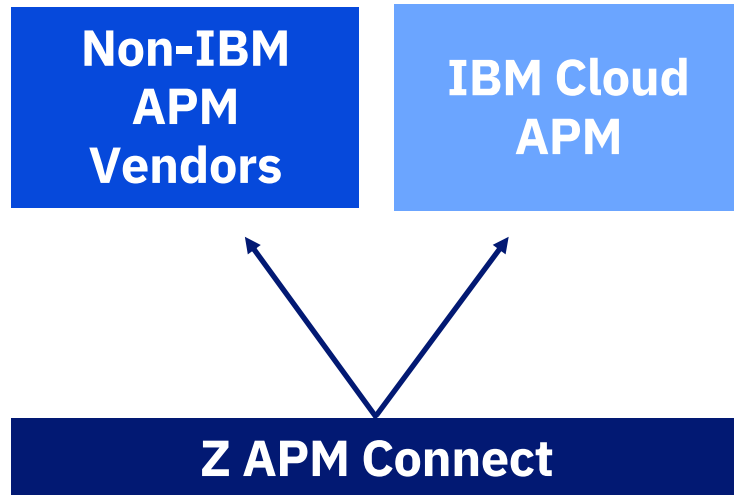
Most APM Vendors Offer Little Mainframe Visibility



But end-user applications span all these teams



Two Key Areas of Capability Enabled by Z APM



Resource Monitoring

- Supported only with IBM Cloud APM in V5.5
- OMEGAMON required to pull resource monitoring data

Transaction Tracking

- Supported with AppDynamics APM in V5.5 and currently in beta with IBM Cloud APM
- View full end-to-end transactions from mobile to mainframe in a single dashboard for faster application issue isolation, identification of mainframe components in specific applications, and reduction of false-positives issues for zSMEs
- Allows customers to track the performance and availability of individual transactions as they flow through z/OS subsystems.
- Data is captured directly and does not rely on OMEGAMON and hence it can support customers running competitive monitoring solutions like BMC/CA/ASG etc.

Personas Involved During a Mainframe Issue



Miki,
IT Ops Practitioner



Jim,
Z Subject Matter Expert



File Edit View Tools Navigate Help 02/13/2017 13:36:39
Auto Update : Off
Plex ID : LPAR400J
SMF ID : SYS

Command ==> Address Space Overview

KMSASPO

Address Space Counts

Address Space Count.....	434	Total Enclave Count.....	95
Started Task Count.....	360	Active Enclave Count.....	31
TSO User Count.....	23	Inactive Enclave Count....	64
Batch Job Count.....	32	APPC Count.....	19

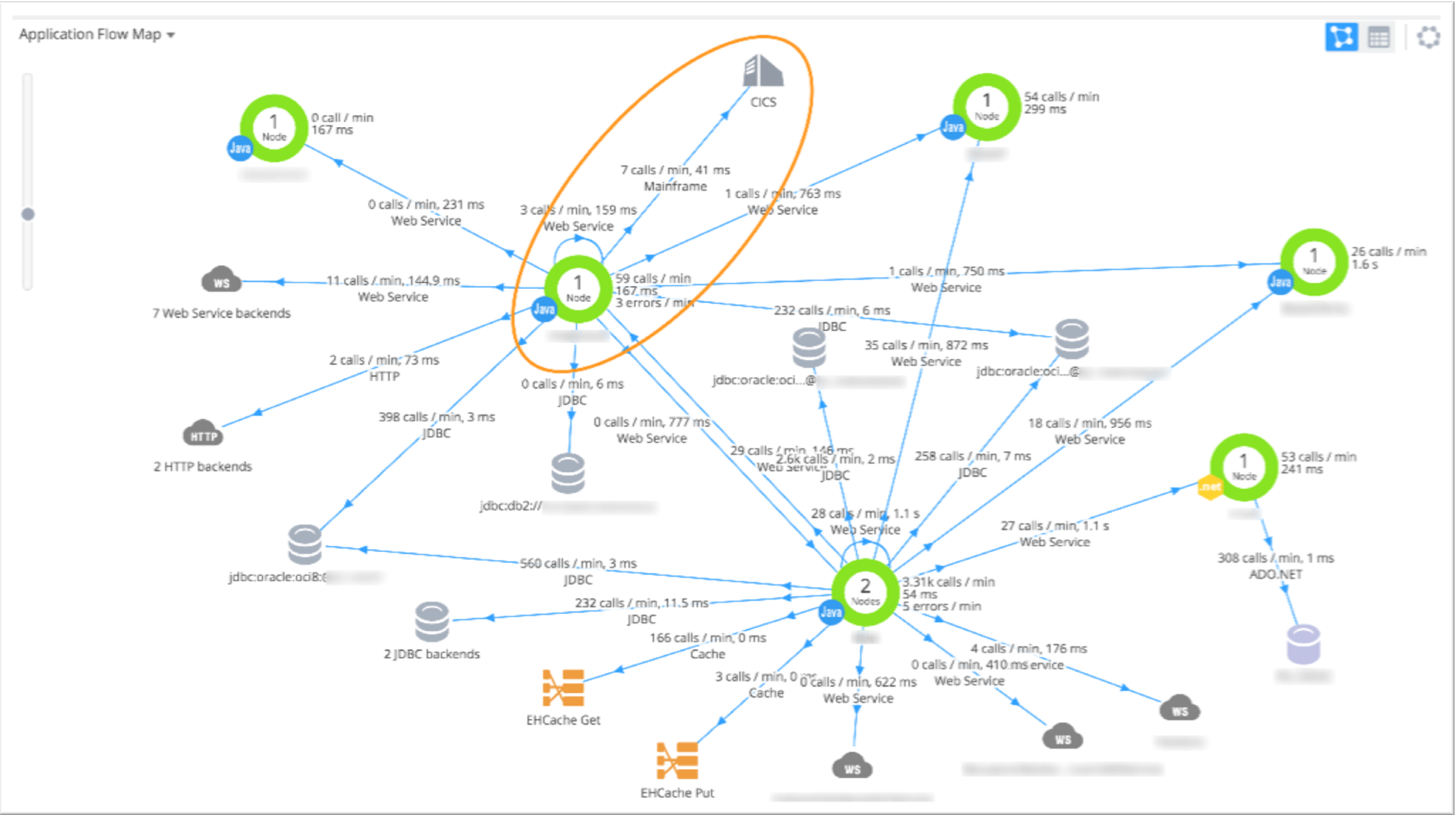
CPU Utilization Summary

Columns 4 to 6 of 37 Rows 1 to 22 of 434

Address Space Name	ASID	ΔCPU Percent	TCB Percent	SRB Percent	CPU% Excluding Home SRB Time
WLM	000B	0.9	0.9	0.0	0.9
CICSMH08	0105	0.9	0.4	0.0	0.9
WB5BGAP	014C	0.9	0.9	0.0	0.9
XCFAS	0006	0.4	0.4	0.0	0.4
DB1DMSTR	00E2	0.4	0.4	0.0	0.4
INGNAPPL	0129	0.4	0.4	0.0	0.4
JJD0NWJT	0197	0.4	0.4	0.0	0.4
MGOUV4	01AC	0.4	0.4	0.0	0.4
DC1HMSTR	01AE	0.4	0.4	0.0	0.4
DC1DMSTR	01C0	0.4	0.4	0.0	0.4
MASTER	0001	0.0	0.0	0.0	0.0
PCAUTH	0002	0.0	0.0	0.0	0.0
RASP	0003	0.0	0.0	0.0	0.0
TRACE	0004	0.0	0.0	0.0	0.0
DUMPSRV	0005	0.0	0.0	0.0	0.0
GRS	0007	0.0	0.0	0.0	0.0
SMSPDSE	0008	0.0	0.0	0.0	0.0
SMSVSAM	0009	0.0	0.0	0.0	0.0
CONSOLE	000A	0.0	0.0	0.0	0.0
ANTMAIN	000C	0.0	0.0	0.0	0.0
ANTAS000	000D	0.0	0.0	0.0	0.0
DEVMAN	000E	0.0	0.0	0.0	0.0

BACK HOME Hub OMD1HUB:CMS on platform SP22(z/OS) 01/002

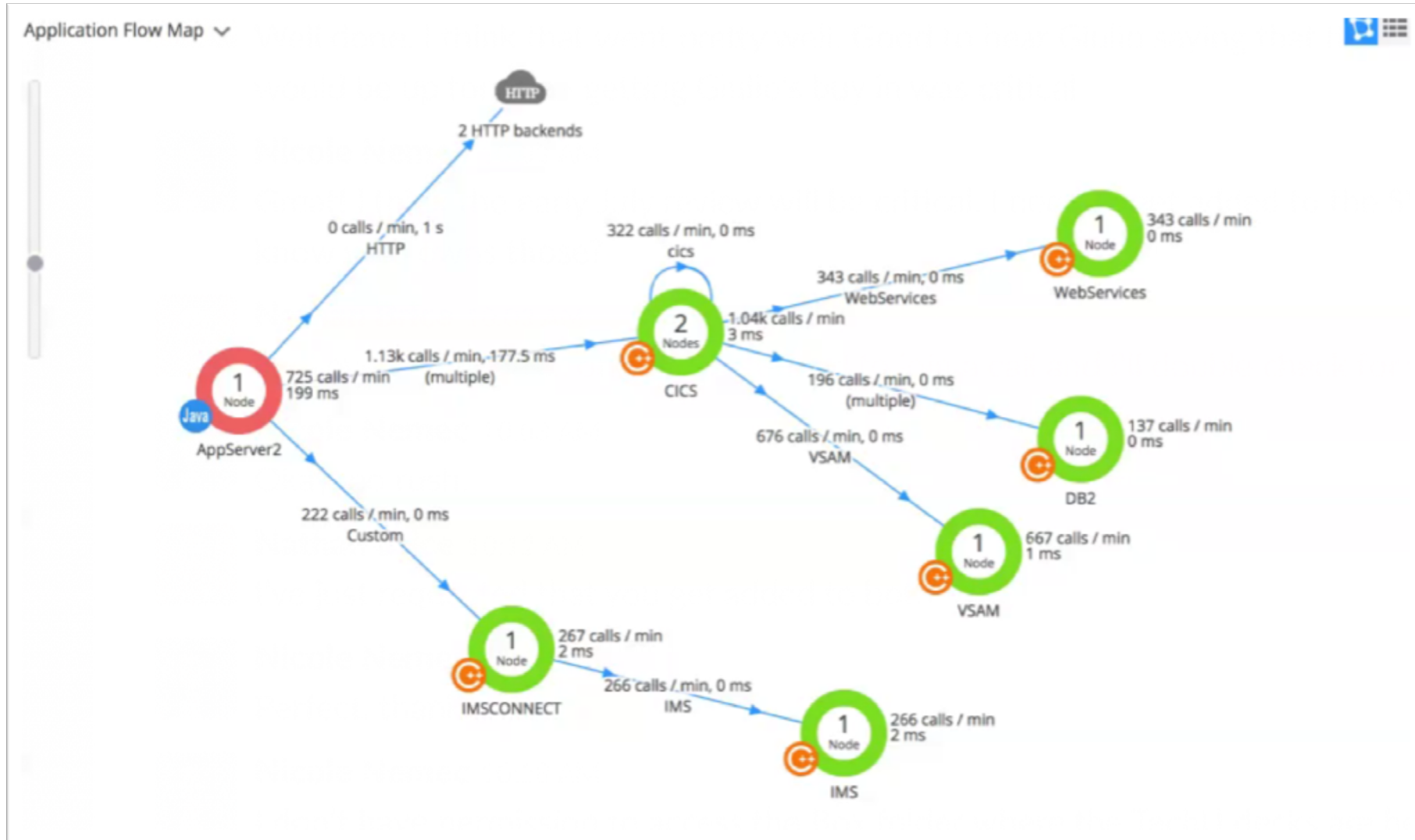
Out of the Box, AppDynamics Flowmaps Show the Mainframe as a Black Box



Typical Troubleshooting Workflow Today



Mainframe Transactions Now Visible with IBM Z APM Connect



Troubleshooting Workflow with Z APM Connect



AppDynamics generated a alert showing a performance deviation.

I can clearly see the z/OS Db2 response is slower than normal. I'm going to speak to Db2 zSME.

- Faster isolation & fixes**
- Reduced application downtime**
- Fewer false positives for mainframe SMEs**



Uh-oh!
That transaction is waiting on a lock slowing down the response time.



IT Ops

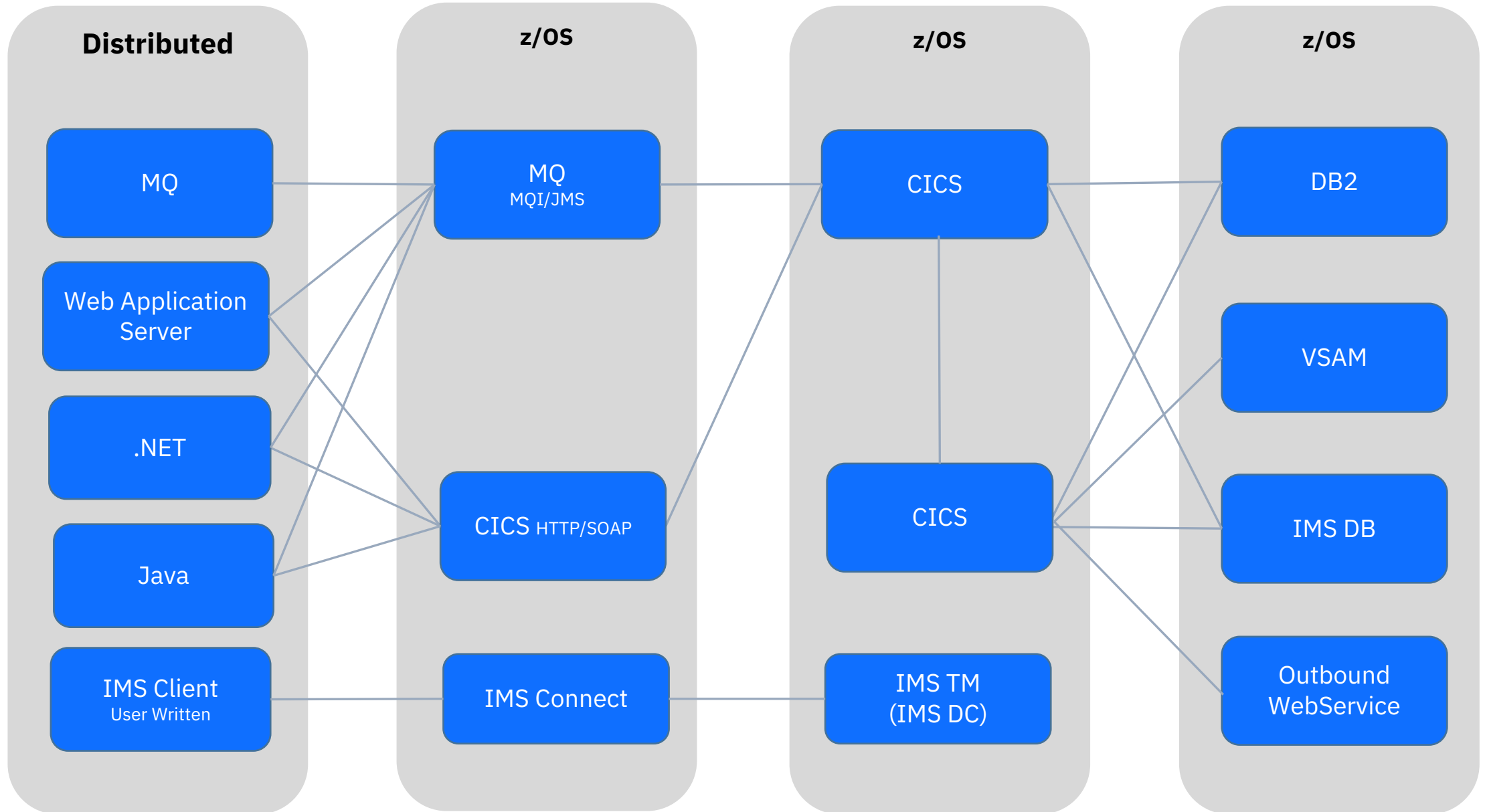


Z DB Admin

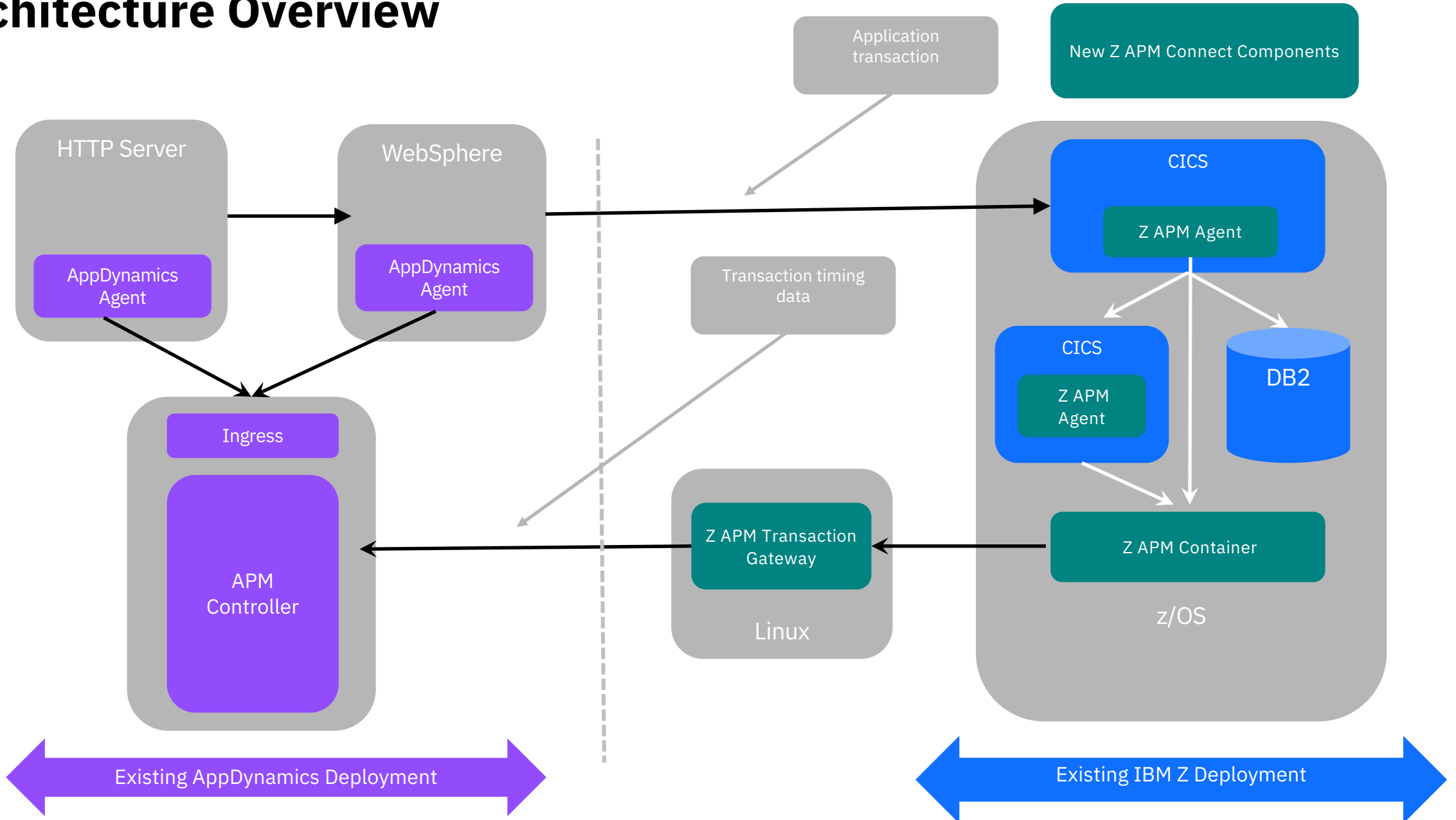
“Too much information in the wrong hands can be dangerous. You’re going to give someone information they don’t understand, and I find that quite scary.”

- Head of Mainframe at South Africa’s largest bank

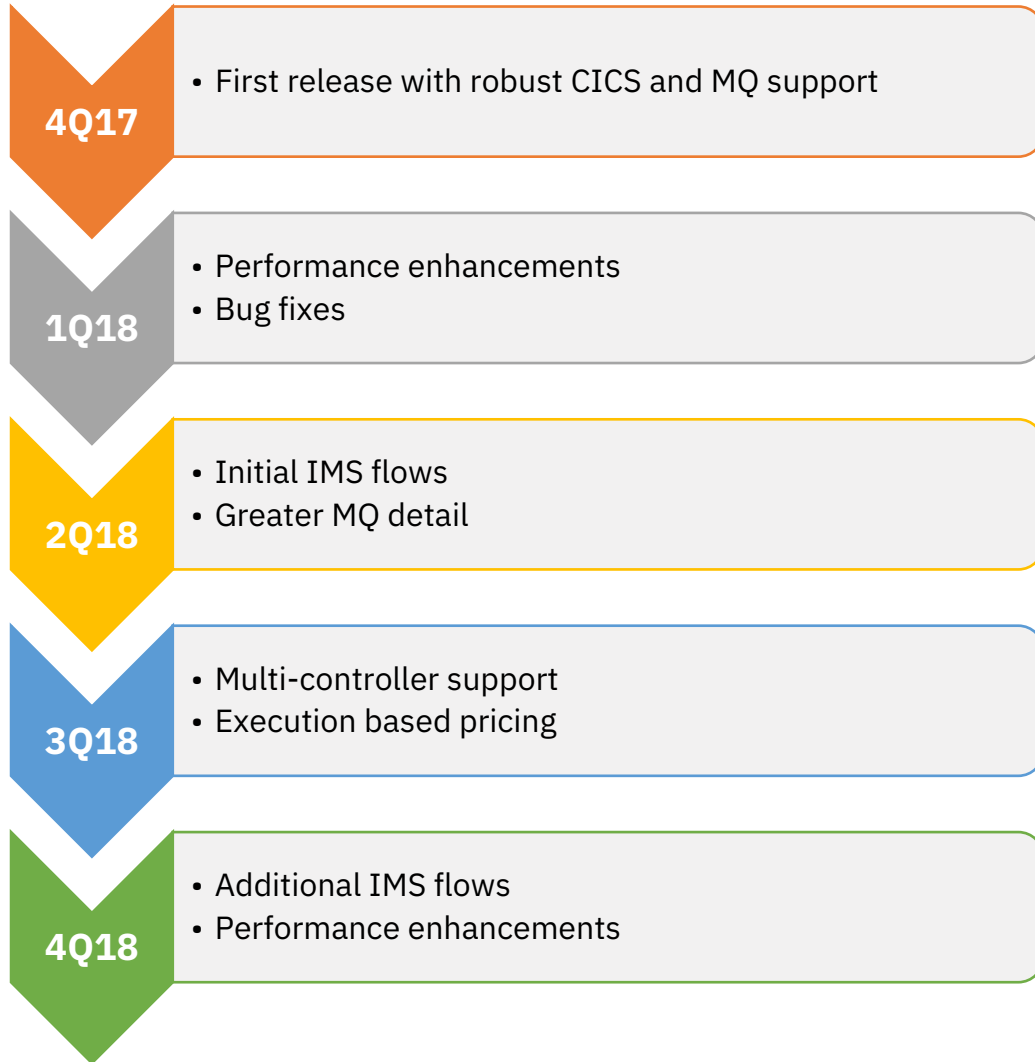
Currently Supported z/OS Transaction Flows



Architecture Overview



IBM Z APM Connect's First Year



Execution Based Pricing

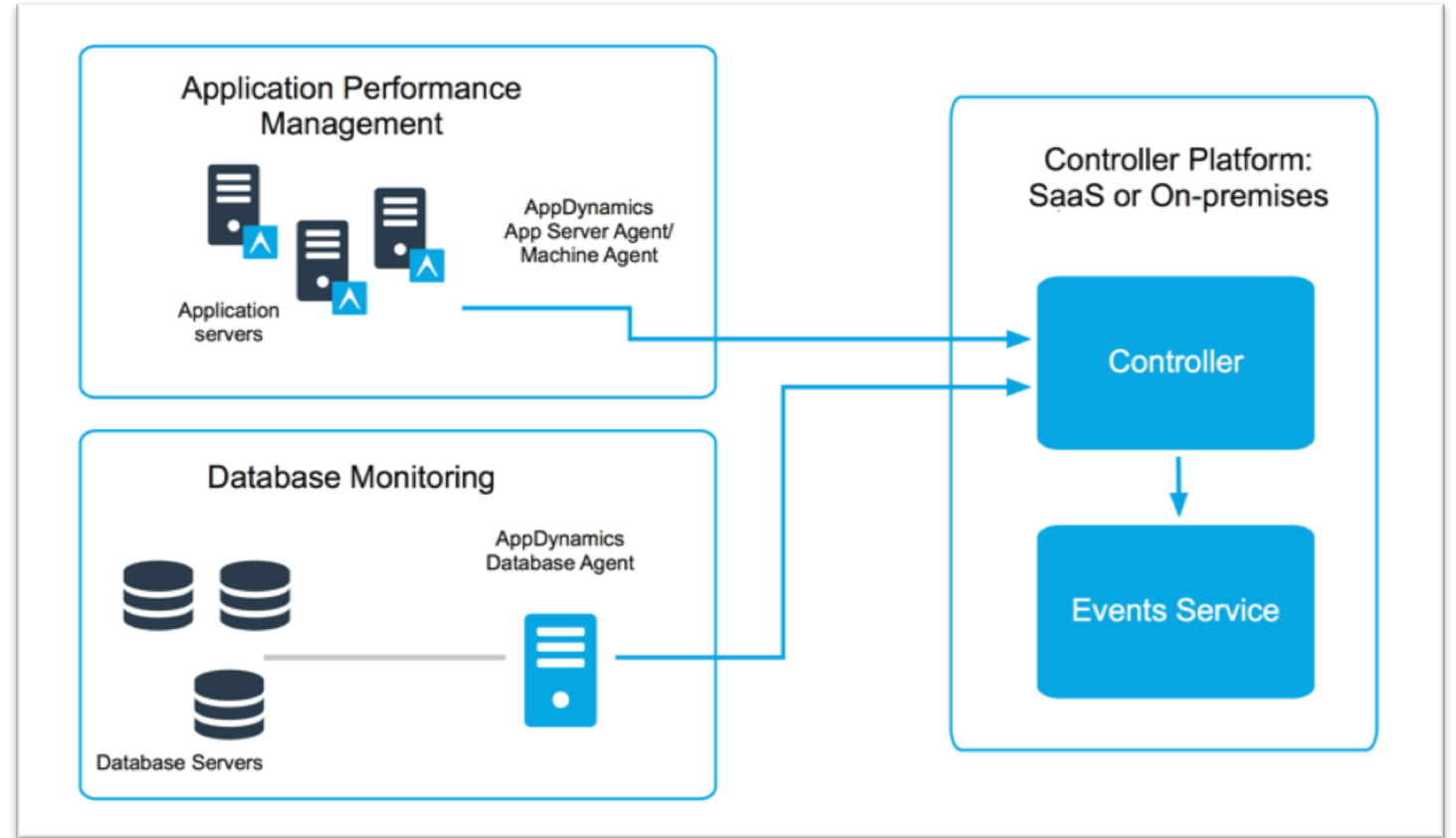
To enable a more agile digital transformation of your business, Z APM Connect will now be available to purchase per LPAR rather than based on the size of your z/OS deployment

Multiple Controller Support

For large deployments of AppDynamics, customers will multiple AppDynamics controllers will have an even greater level of visibility

Multiple controller support detail

- The AppDynamics controller is the central management server where all data is stored and analyzed, and all AppDynamics agents connect to the controller to report data
- Earlier versions of the product could only support visibility into one controller
- IBM Z APM Connect v6.1 supports multiple AppD controllers for enhanced visibility



This support is essential for any clients with multiple AppDynamics controllers which is typical for the largest IBM Z clients

Execution based pricing detail



Execution Based

The required license capacity of z Systems IPLA sub-category program with these terms equals the capacity of the LPAR(s) where the z Systems IPLA program executes. Execution-based programs will appear on the Sub-Capacity Report.

z/OS Based

The required license capacity of a z Systems IPLA program with these term equals the license capacity of z/OS (and z/OS.e) on the machine(s) where the z Systems IPLA program executes. z/OS-Based programs will not appear on the Sub-Capacity Report because z/OS appears there.

Value Drivers

- Purchase the product just for the LPARs where you need it
- Roll out of end-to-end visibility is more approachable working on an individual basis
- Enables initial and faster smaller deals for land and expand approach

Client Feedback

“Before this integration, the mainframe was just a black box and we couldn’t truly manage our applications end-to-end”
- Large Nordic Bank

“With this step, System Z is a fully integrated component in the global eco-system which enables us to manage applications transparency end-to-end. Stop finger-point and focus on the real problem!”
- Swiss Bank

Assets – General Z APM Connect

- Overview video: <http://ibm.biz/ZAPMOverview>
- Product Page: <http://ibm.biz/ZAPMConnect>
- Product Documentation: <http://ibm.biz/ZAPMDocs>
- Announcement letter: <http://ibm.biz/ZAPMV6-1Announce>
- Beta Page: <http://ibm.biz/ZAPMBeta>
- Z APM Connect for zSMEs blog: <https://developer.ibm.com/mainframe/2017/11/03/ibm-z-apm-connect-apm-can-help-zos-operations-teams/>
- VU Pricing details: <http://www-03.ibm.com/systems/z/resources/swprice/zipla/index.html>

Assets – APM Vendor Specific Details

IBM Cloud APM Specific Information

- Product page: <https://www.ibm.com/us-en/marketplace/application-performance-management>
- Cloud APM - z Systems extension pack announcement + part numbers: https://www-01.ibm.com/common/ssi/ShowDoc.wss?docURL=/common/ssi/rep_ca/4/897/ENUS217-064/index.html&lang=en&request_locale=en
- IBM Cloud APM v8.1.4: http://www-01.ibm.com/common/ssi/ShowDoc.wss?docURL=/common/ssi/rep_ca/8/897/ENUS217-348/index.html&lang=en&request_locale=en
- IBM Cloud APM SaaS Overview and links blog: <http://ibm.biz/BdiYsG>
- Walk through live demo blog: <http://ibmurl.hursley.ibm.com/O1CQ>

AppDynamics Specific Information

- Partnership announcement: <http://ibm.biz/IBMAppDPartnership>
- Product Announce Blog: <https://blog.appdynamics.com/news/announcing-ibm-z-apm-connect-for-appdynamics/>
- AppD Summit session: <http://ibm.biz/AppDSummitZAPMConnect> (33 minutes)
- AppD Summit demo: <http://ibm.biz/ZAPMDemo> (9 minutes)

We want your feedback!

- Please submit your feedback online at
 - <http://conferences.gse.org.uk/2018/feedback/OG>
- Paper feedback forms are also available from the Chair person
- This session is OG

